

CoE197s

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Exercise 5: Volumes

1) Setting up the server

```
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker run --rm -d --name apache -p 80:80 httpd:2.4
Unable to find image 'httpd:2.4' locally
2.4: Pulling from library/httpd
69692152171a: Pull complete
7284b4e0cc7b: Pull complete
3678b2d55ccd: Pull complete
ab492cf0b2a4: Pull complete
991f7f97a9d8: Pull complete
Digest: sha256:e4c2b93c04762468a6cce6d507d94def02ef4dc285278d0d926e09827f4857db
Status: Downloaded newer image for httpd:2.4
74a46954bffd2c09ab4913b2528429524c0a1b492cc7a518ca4d68f140958149
```

```
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>curl localhost
<html><body><h1>It works!</h1></body></html>
```

```
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker cp index.html apache:/usr/local/apache2/htdocs/
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>curl localhost
<html><body><h1>It works in Docker!</h1></body></html>
```

```
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker stop apache
apache
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker run --rm -d --name apache -p 80:80 httpd:2.4
1aa16f34076a3765598b2fa64fa0f8869e34dcae066c71d6e31807d113895e72
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>curl localhost
<html><body><h1>It works!</h1></body></html>
```

2) Managing Volumes

```
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker volume ls
DRIVER      VOLUME NAME
local       bd05eb058c62c6f8a58b43b12fb9d14a919fb2f68ec131d6211eb2f06808e1da
```

```
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker volume create myvolume
myvolume
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker volume ls
DRIVER      VOLUME NAME
local       bd05eb058c62c6f8a58b43b12fb9d14a919fb2f68ec131d6211eb2f06808e1da
local       myvolume
```

```
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker volume rm myvolume
myvolume
C:\Users\Dell\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker volume ls
DRIVER      VOLUME NAME
local       bd05eb058c62c6f8a58b43b12fb9d14a919fb2f68ec131d6211eb2f06808e1da
```

3) Mounting Volumes on containers

```
C:\Users\De11\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker run --rm -d --name apache -p 80:80 -v httpd_htdocs:/usr/local/apache2/htdocs/ httpd:2.4
e704c7be19ad6ef89c88544421685e27669bd81d2757bb18360dbd6a07c5702d
```

And run `curl` to verify it worked.

```
C:\Users\De11\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker cp index.html apache:/usr/local/apache2/htdocs/
```

```
C:\Users\De11\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>curl localhost
```

```
curl: (6) Could not resolve host: localhost
```

```
curl: (6) Could not resolve host: host
```

```
C:\Users\De11\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker cp index.html apache:/usr/local/apache2/htdocs/
```

```
C:\Users\De11\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>curl localhost
```

```
<html><body><h1>It works in Docker!</h1></body></html>
```

```
C:\Users\De11\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker volume rm httpd_htdocs
httpd_htdocs
```

4) Mounting host directories on containers

```
C:\Users\De11\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>docker run --rm -d --name apache -p 80:80 -v /home/david/src/docker-training/exercises/basic/5-volumes:/usr/local/apache2/htdocs/ httpd:2.4
966c9b2d89e906c931d973b0ce99b3edec667984dac3801f6992168b4f534853
```

```
C:\Users\De11\OneDrive\Desktop\Academic\CoE197s\ME8\5-volumes>curl localhost
```

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 3.2 Final//EN">
```

```
<html>
```

```
<head>
```

```
<title>Index of /</title>
```

```
</head>
```

```
<body>
```

```
<h1>Index of /</h1>
```

```
<ul><li>
```

```
</ul></body>
```

```
</html>
```

The `-v` flag to accomplish this is almost identical to the previous one. Simply specify an absolute path to a local directory instead. In our case, we'll pass `/home/david/src/docker-training/exercises/basic/5-volumes` to specify the `5-volumes` directory in this repo, which conveniently contains a modified version of the HTML file.

```
docker run --rm -d --name apache -p 80:80 -v /home/david/src/docker-training/exercises/basic/5-volumes:/usr/local/apache2/htdocs/ httpd:2.4
```